

Appl. No.: 10/534,451  
Amdt. dated June 15, 2009  
Reply to Office Action of February 2, 2009

## REMARKS/ARGUMENTS

In response to the Requirement for Restriction, Applicant confirms the provisional election of the claims of Group I, Claims 1-6 drawn to a spinneret plate. Applicant requests reconsideration by the Examiner and modification of the Restriction Requirement to the extent that it groups Claims 7-9, drawn to a spin packet, separately from the claims of Group I. Applicant submits that Claims 1-6 drawn to a spinneret plate and Claims 7-9 drawn to a spin packet are directed to the same inventive concept and share the same or corresponding special technical feature. The Examiner contends that the common technical feature in all groups is a spinneret plate with non-round holes and cites U.S. Patent No. 3,109,195 as allegedly teaching the use of a spinneret plate with non-round holes. Applicant submits that the special technical feature that is shared by Claims 1-6 and Claims 7-9 is not merely the presence of non-round holes. Rather, in the spinneret plate of Claim 1 and in the spin packet of Claim 7, there are non-round holes, and in addition, the non-round holes in one row are rotated in relation to the non-round holes of another row. This special technical feature is not found in the prior art document cited by the Examiner or in the other prior art of record. Therefore, reconsideration and modification of the Restriction Requirement as proposed above is believed to be appropriate and is respectfully solicited.

The specification has been amended to include subheadings and to address the objection set forth in paragraph 6 of the Official Action.

Independent Claim 1 has been amended to more clearly define the structural features which distinguish the spinneret plate of the present invention from the cited prior art, as explained more fully below. In addition, dependent Claim 5 has been amended to provide proper antecedent basis and to thereby overcome the objection of paragraph 7 of the Official Action.

Claim 1 stands rejected as being anticipated by Takemoto et al, U.S. Patent No. 4,812,361. The Examiner explains in paragraph 13 that when Figure 4B of Takemoto is expanded to show more rows, and then rotated, a new set of rows appear that anticipates the

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claimed structure. Applicant submits that Claim 1 as now presented clearly distinguishes over this structure.

In particular, Claim 1 specifies that identically oriented non-round holes are positioned in a first row, and additional non-round holes are positioned in at least one additional row, wherein the holes of the first row are offset to the holes of the next adjacent row, and wherein the holes of the first row have a positional arrangement which differs from the positional arrangement of the holes of said at least one additional row through rotation of the holes.

Referring to the arrangement of holes as shown in Figure 4B of Takemoto, it is clear that the top row of holes are not identically oriented and they are not offset to the holes of the next adjacent row. When considering the configuration shown in Figure A of the Official Action, where Figure 4B has been expanded and rotated, this configuration still fails to meet the specific arrangements set forth in Claim 1 as now amended. The Examiner indicates that the line shows the position of the rows. It is evident that none of the rows have the non-round holes identically oriented. Furthermore, it will be seen that the holes of one row do not have a positional arrangement which differs from the positional arrangement of the holes of another row through rotation of the holes. Accordingly, Claim 1 defines subject matter which is novel with respect to the cited Takemoto et al. patent.

Claim 2 has been rejected under 35 U.S.C. §103 as being unpatentable over Takemoto in view of Ortega, U.S. Publication No. 2001/0055682. The Examiner acknowledges that Takemoto does not teach a spinneret plate having two different types of holes. However, the Examiner contends that it would be obvious from Ortega, who teaches a spinneret plate with holes of different cross sections or sizes, to use a spinneret plate with holes having different cross sections in the Takemoto plate.

It should be noted that the Takemoto patent is concerned with producing acrylic fibers, which are produced by a wet-spinning process. In a wet-spinning process, a spinning feed solution containing a solvent is extruded through holes of a spinneret into a liquid coagulating bath. The coagulating bath contains a low concentration of organic solvent in water. Takemoto teaches that the dimensions of the Y-shaped cross sections spinneret holes and the relationships of the three legs are very important in obtaining the intended Y-shaped cross sections and if these

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values are departed from, then filament breaks will be likely and it is not possible to achieve stable spinning. See Column 2, Lines 56 to Column 3, Line 5. Takemoto further teaches that the specific arrangement of holes i.e., inverting every other row as shown in Figure 4B, is for the purpose of inhibiting the tendency of the filaments to carry large amounts of water.

The Ortega reference, which is relied upon as a secondary reference, is concerned with producing *melt spun* filaments. In melt spinning, molten polymer is extruded from a spinneret hole into air, where a cooling current of air quenches and solidifies the molten polymer to form filaments. The teaching at paragraph 24 of Ortega is with specific reference to a spinneret for melt spinning. In a spinneret for melt spinning, the capillary diameters and length to diameter ratios are specifically designed and engineered to take into account the flow properties of molten polymer so that the molten polymer can be extruded through the spinneret holes to form continuous filaments without breakage. The flow properties of a solvent-containing spinning solution used in wet spinning are quite different from the properties of a molten polymer. Persons of ordinary skill in the art know quite well that wet spinning and melt spinning are two distinctly different processes. The processing parameters and equipment are not interchangeable. Therefore the person of ordinary skill in the art would not look to a teaching with respect to melt spinning and apply it to a wet spinning process. In particular, the configuration of Fig 4B of Takemoto is proposed to avoid a problem that occurs specifically in wet-spinning and does not occur in melt spinning. The wet spinning teachings of Takemoto and the melt spinning teaches of Ortega et al. are for distinctly different processes. Therefore, the Ortega reference represents non analogous art with respect to the Takemoto teachings. The person of skill in the art would not combine Ortega's teachings relating to a spinneret plate for melt spinning with the wet spinning process of Takemoto. For this reason, the rejection of Claim 2 as obvious is clearly improper and should be withdrawn.

Claims 3-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Takemoto in view of Hagen et al., U.S. Patent No. 5,393,219. The Hagen patent is also concerned with a melt spinning process and with a spin pack specifically for melt spinning. For this reason, and as explained more fully above, the teachings of Hagen et al. are not applicable to Takemoto. The person of ordinary skill in the art would not combine the

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teachings of the Hagen et al. melt spinning pack with the wet spinning spinneret used by Takemoto. For these reasons, the rejection of Claims 3-6 over the combination of Takemoto and Hagen et al. is improper and should be withdrawn. Furthermore, in Figure 9 of Hagen et al., a spinneret plate is shown with two sections, each possessing a plurality of rows of spinning holes. But these spinning holes are round. There is nothing in Hagen et al. about trilobal or multiarmed spinning holes.

With regard to claim 4, the Examiner states that in two groups of holes would be obvious in view of Figure 9 of Hagen et al. and that it would have been obvious to try to arrange the holes in any angular orientation. However, this overlooks the fact that the holes of Fig. 9 of Hagen et al. are round and therefore it is not possible to alter or change the angular orientation of the holes. The arrangement of the holes of the embodiment of claim 4 of the present application is preferred as this allows a very efficient cooling of the molten polymer filaments. For obtaining this effect, it is essential that the holes are non-circular and that their orientation to each other is rotated by 180°. There is absolutely nothing in Hagen et al. which would lead to such an arrangement. Likewise, nothing in the combined teachings of Hagen et al. and Takemoto would lead to such an arrangement, notwithstanding the non-combinability of these teachings, as noted above.

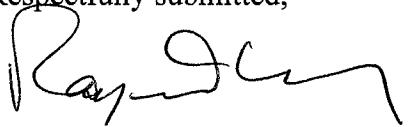
Favorable reconsideration by the Examiner and formal notification of the allowability of the claims as now presented are respectfully solicited.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit

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